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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,788	10/30/2003	Isao Matsui	07906.0019	7740

22852 7590 01/04/2007  
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
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WASHINGTON, DC 20001-4413

EXAMINER
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WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/695,788

Applicant(s)

MATSUI, ISAO

Examiner

George P. Wyszomierski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-11 is/are allowed.
- 6) ☒ Claim(s) 12 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-013511, for reasons of record in the prior Office Action.

The JP '511 reference discloses pyrolyzing a transition metal carbonyl in the presence of another gas such as hydrogen, carbon monoxide, or an inert gas such as nitrogen, to form particles. With respect to instant claim 14, operational example 1 of the prior art uses iron carbonyl. With respect to instant claims 15 and 16, the carbonyls recited in the instant claims are within the purview of the transitional metal carbonyls employed in the '511 process. With respect to instant claim 17, JP '511 discloses controlling the relative flow rates of the carbonyl and the other gas; any resultant effect on particle diameter would be the same in either the prior art or the claimed invention.

The JP '511 reference does not disclose using the produced particles as a catalyst in a reaction that inhibits the pyrolyzing step, as required by the instant claims. However, the actual chemical reactions that occur in JP '511 appear to be identical or substantially so to those that occur in the present invention. Compare, for instance, equations 1, 2 and 3 of the present specification to the chemical reactions described at pages 6-8 and 11 of the translation of JP '511. It is a reasonable assumption that any effects, catalytic or otherwise, on the rates of the pyrolyzing reaction would likewise be the same in either the prior art or the claimed invention, given that the reactants and reaction conditions may be the same.

Consequently, a prima facie case of obviousness has been established between the disclosure of JP '511 and the presently claimed invention.

3. In a response filed October 19, 2006, Applicant disputes the reasoning in the above rejection, i.e. Applicant states that the '511 reference does not disclose chemical reactions substantially identical to those of the present claims, and/or states that the '511 reference does not disclose an inhibition component, a reaction inhibitor generating gas, or using a produced particle as a catalyst. Applicant's arguments have been carefully considered, but are not persuasive of patentability because, in the process of the '511 reference, the equivalent to the claimed "reaction inhibitor generating gas" would be hydrogen and the "inhibition component" would be carbon monoxide (part of the "mixed gas" or "dilution gas" of the '511 process). The "source gas" in the '511 process is the iron carbonyl. The reaction in the prior art would proceed in the same manner as set forth in equations (1) and (3) of the present specification, i.e. the carbonyl will be decomposed to iron and CO, and the reverse reaction will also occur. As stated at page 8, lines 11-12 of the specification, "if CO exists, the chemical reaction (equation 3) occurs at the same time." This statement by the present Applicant is held to be a factual statement related to the chemistry of the materials employed in such a process, and therefore would also be true in the '511 process, regardless of whether or not actually stated therein.

4. Claims 1 and 3-11 are allowable over the prior art of record, and claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if

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rewritten in independent form including all of the limitations of the base claim and any intervening claims.


5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300. This Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER  
GROUP 1700

GPW  
December 29, 2006